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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,305	08/27/2001	Tiziano Dall'Occo	US 18024	3720

7590

04/02/2003

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EXAMINER

LEE, RIP A

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 04/02/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/914,305

Applicant(s)

DALL'OCCO ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-15, 20, 21, 23 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20, 21, 23 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-15, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 23, 2003 has been entered.

Applicants have amended claim 1. Claims 16-19 and 24 were canceled.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-7, 9-12, 16, and 17, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 98/22486 to Ewen *et al.* for the same reasons set forth in the previous office action (Paper No. 8).

6. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/22486 to Ewen *et al.* in view of U.S. Patent No. 5,948,873 to Santi *et al.* for the same reasons set forth in the previous office action (Paper No. 6).

***Allowable Subject Matter***

7. As indicated previously, claims 20, 21, 23, and 27 are allowed. The claimed processes for making cyclopentadithiophene compounds are not taught in the prior art, and one having skill in the art would not find it obvious to arrive at the claimed processes.

***Response to Arguments***

8. The Applicants traverse the rejection of claims 1-7, 9-12, 16, and 17, and 24-26 under 35 U.S.C. 102(b) as being anticipated by WO 98/22486 to Ewen *et al.* The Applicant's arguments have been considered fully, but they are not persuasive. The following points were expressed.

a) The Applicants submit that Ewen *et al.* fails to disclose specifically polymerization of a specific  $\alpha$ -olefin (ethylene) using a metallocene of the present invention. That is, the reference fails to disclose specifically the polymerization of ethylene using a metallocene of the present invention.

This notion is not entirely correct because claim 19 of Ewen *et al.* is drawn to production of polyethylene, polypropylene, or copolymers thereof. Note that the claim specifically recites the word polyethylene. One further notes that the present claims are drawn to a process for preparation of "polymers of ethylene." Certainly this term includes polyethylene homopolymer, but it also means ethylene copolymers, as indicated by the supporting recitation, "...comprising the polymerization reaction of ethylene and optionally one or more olefins... (see present claim 1, line 2)." Therefore, the claim is not constrained to formation of polyethylene homopolymer alone.

Turning to the "metallocenes of the present invention," it can be seen from claims 9-11, page 36, and page 76, that the structures taught in Ewen *et al.* do meet the requirements set forth in the present claims. As such, polymers of ethylene prepared from metallocenes of the present claims are a distinctive feature of the invention of Ewen *et al.*

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b) The Applicants indicate that the claims are directed to a single species – polymerization of ethylene using a metallocene of formula (I) – is not anticipated because one of ordinary skill in the art would not be able to “at once envisage” the claimed species.

As discussed in the paragraph (a), since Ewen *et al.* teaches formation of polyethylene homopolymer and copolymers, and since the present claims are not directed solely at formation of polyethylene homopolymer, the claims are anticipated by the prior art. Also, the metallocenes of formula (I) are adequately disclosed in the prior art. Therefore, it is maintained that the skilled artisan would be able to envisage polymerization of ethylene using a metallocene of formula (I) upon reading the disclosure of Ewen *et al.*

It appears that the Applicant's arguments arise from the fact that the only example in Ewen *et al.* of ethylene polymerization is that which utilizes a catalyst containing isopropylidene(cyclopentadienyl)(cyclopentadithiophene)zirconium dichloride. Use of this species is specifically excluded in present claim 1. While this may be true, the criterion for anticipation does not rest on specific examples or embodiments alone.

Insofar as the compounds must be “at once envisaged” by the skilled artisan, there is no mandate that “one must be able to draw the presently claimed structural formula or write the name of each of the metallocenes,” as indicated by the Applicant. This fact notwithstanding, given that Ewen *et al.* lists discrete metallocene complexes on pages 15-29, the skilled artisan would not be hard pressed to draw or enumerate readily metallocenes that meet the structural criteria of the present claims. As an example, isopropylidene(3-*n*-hexylcyclopentadienyl)(cyclo-

pentadithiophene)zirconium dichloride is well within the scope of Ewen *et al.*, and it is not one of the species excluded in present claims 1, 25 or 26.

c) The presentation of experimental results has been reviewed. The Applicants are reminded that invoking unexpected results is not sufficient to overcome a rejection based on anticipation.

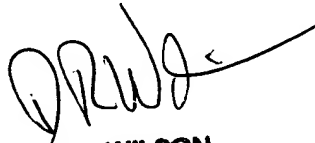
9. The Applicants traverse the rejection of claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/22486 to Ewen *et al.* in view of U.S. Patent No. 5,948,873 to Santi *et al.* The Applicant's arguments have been considered, but they are not persuasive because there is no showing of why one would not find it obvious to use the process described by Ewen *et al.* for the polymerization of cyclic olefin monomers such as those shown in Santi *et al.*

In view of the discussion above, the rejections of record have not been withdrawn.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

  
D. R. WILSON  
PRIMARY EXAMINER

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March 27, 2003